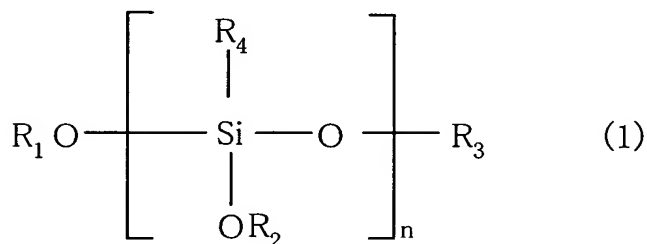


CLAIMS

1. A composite comprising a heat-resistant fiber and a siloxane polymer.

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2. The composite according to claim 1, wherein the siloxane polymer is a crosslinked siloxane polymer obtainable by polycondensing a siloxane compound mainly of the following formula (1):



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(wherein n represents an integer of 2 to 10; R_1 , R_2 , R_3 and R_4 may be each the same or different, and represent a hydrogen atom or an alkyl group of 1 to 4 carbon atoms; and R_2 and R_4 may be each the same or different every repetition unit).

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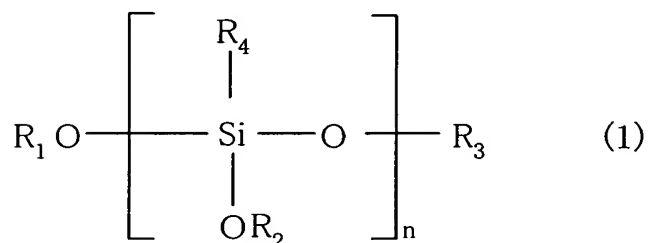
3. The composite according to claim 1 or 2, wherein the heat-resistant fiber is one or more kinds of fibers selected from the group consisting of a wholly aromatic polyamide fiber, a wholly aromatic polyester fiber, a polyparaphenylene benzobisoxazole fiber, a fluorine fiber, a carbon fiber, a glass fiber and a quartz fiber.

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4. The composite according to claim 1 or 2, wherein the heat-resistant fiber is a polyparaphenylene terephthalamide

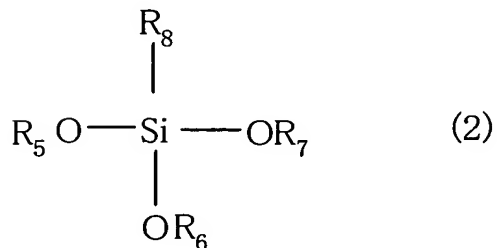
fiber.

5. A process for preparing a composite comprising a heat-resistant fiber and a siloxane polymer, which comprises coating or impregnating a heat-resistant fiber with a solution containing a compound represented by the following formula (1):

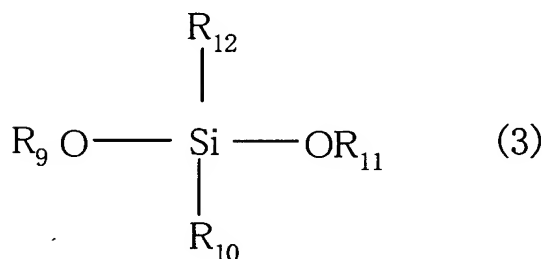


(wherein n represents an integer of 2 to 10; R₁, R₂, R₃ and R₄ may be each the same or different, and represent a hydrogen atom or an alkyl group of 1 to 4 carbon atoms; and R₂ and R₄ may be each the same or different every repetition unit), a catalyst for curing the compound represented by the formula (1) and, optionally, reaction water, and curing the compound represented by the formula (1).

6. The process according to claim 5, wherein the solution further contains at least one kind of a compound selected from the group consisting of a compound represented by the formula (2):



(wherein R_5 , R_6 and R_7 may be each the same or different, and represent a hydrogen atom, an alkyl group of 1 to 10 carbon atoms, an alkenyl group of 2 to 10 carbon atoms or a C_{1-6} alkoxy- C_{1-4} alkyl group, and R_8 represents an alkyl group of 1 to 10 carbon atoms, an alkenyl group of 2 to 10 carbon atoms or an aryl group of 6 to 20 carbon atoms, and one or more hydrogen atoms of each of said groups may be substituted with an epoxy group, a glycidyl group, an amino group, a methacryl group, an acryl group, an ureido group, a mercapto group or an isocyanate group directly or via an intervening group), a condensate in which two or more molecules of the compound represented by the formula (2) are condensed (provided that the compound represented by the formula (1) is excluded), a compound represented by the formula (3):



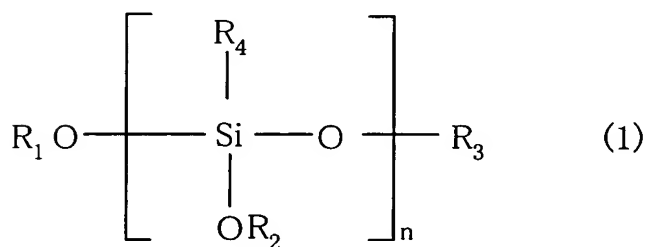
(wherein R_9 , R_{10} , R_{11} and R_{12} may be each the same or different, and represent a hydrogen atom, an alkyl group of 1 to 10 carbon atoms or an alkenyl group of 2 to 10 carbon atoms, and among them, one or both of R_{10} and R_{12} may be an alkyl group of 1 to 10 carbon atoms, an alkenyl group of 2 to 10 carbon atoms or an aryl group of 6 to 20 carbon atoms, one or more hydrogen atoms of each of said groups may be substituted with an epoxy group or a glycidyl group directly or via an intervening group), and a condensate in which two or more molecules of the compound represented by the formula (3) are condensed.

7. A fiber-reinforced glass comprising a heat-resistant fiber and a siloxane polymer as a constituent component.

8. A heat-resistant fiber covered with a siloxane polymer.

9. The heat-resistant fiber according to claim 8, wherein the heat-resistant fiber covered with a siloxane polymer has a tape-like yarn form.

10. An aramid fiber covered with a siloxane polymer, characterized in that an aramid fiber containing moisture at an equilibrium moisture content or larger is impregnated or coated with a coating solution in which a compound represented by the formula (1), and an organic compound which is hydrolyzable and whose hydrolysate contains a metal serving as a catalyst for curing the compound are dissolved in a substantially anhydrous solvent, and the organic solvent is removed and, at the same time, the compound is cured utilizing the moisture in the aramid fiber as reaction water.



(wherein n represents an integer of 2 to 10; R₁, R₂, R₃ and R₄ may be each the same or different, and represent a hydrogen atom or an alkyl group of 1 to 4 carbon atoms, and R₂ and R₄ may be each the same or different every repetition unit).